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## ANTI-VACCINISM.

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Two charges are made by anti-vaccinators which include all their utterances worthy of a moment's consideration: (1) That vaccination does not protect from small-pox; (2) that the operation of vaccination is the means of introducing into the human system a large number of diseases and diseased conditions and predispositions, almost, if, indeed, not quite all known to pathology, and some known to no pathology but that of anti-vaccinism. If these two charges can be proved utterly false,—and nothing is easier to any candid, impartial, competent, *bona fide* seeker for truth,—no rational person can pretend for a moment that there is any ground for anti-vaccinism, whatever there may be for reform and improvement in the practice of vaccination.

To meet the first charge, it is evident that statistics of the mortality from small-pox in vaccinated and unvaccinated populations, of epidemics of small-pox before and since vaccination, and of the well, imperfectly, and not at all vaccinated in masses of population, in armies, and particularly in hospitals for the treatment of small-pox, must afford conclusive evidence. Such statistics exist to an amount practically inexhaustible, and are recorded with the greatest possible care, honesty, and accuracy in reports of the proper officials of every civilized government, of boards of health, and, above all, of small-pox hospitals. They all invariably and perfectly sustain the doctrine that a simple "good vaccination" in the earliest infancy, even when made with virus of moderately long humanization, though it may, and does frequently, fail to prevent small-pox after adult age, wonderfully modifies the total adult severity, and reduces the total adult mortality and disfigurement from the disease. These statistics also perfectly agree in proving that effectual re-vaccination or even primary vaccination in adult life protects so completely that cases of small-pox, after either, when

done with virus not too far removed from the cow, are as rare as second attacks of small-pox, while no case of small-pox after either primary or effective secondary vaccination in adult life with *true* animal virus, has yet been reported. It is fully believed by those by far the most competent to judge, that small-pox after perfect primary vaccination, followed by effective re-vaccination after the tenth year, with *true* animal virus, will prove to be as rare as third attacks of small-pox, of which perhaps a score are recorded in the whole history of medicine. This belief is based on observation of the typical perfection of the *vaccinia* induced by true animal vaccination, and its entire freedom from those irregular and unprotective developments, the tendency to produce which is one of the serious and frequent defects of virus of very long humanization. I cannot spare enough of my brief space to give even a few items of the statistics to which I have alluded, and which are easily accessible in almost innumerable publications. To those who have any doubt, I commend a careful perusal of Ernest Hart's "Truth about Vaccination," the venerable Dr. W. B. Carpenter's tract with a similar title, Dr. W. M. Welch's admirable "Report of the Municipal Hospital of Philadelphia for 1872," Dr. Robert Grieve's "Influence of Vaccination," Mr. W. T. Iliff's "Small-pox and Vaccination," and the statistics of small-pox in both armies in the Franco-Prussian war. The list might be extended indefinitely. I will give but one illustration, suggested by recent reading. In 1721 the population of Boston was 11,000. In the same year there were in Boston 5,759 cases of small-pox; mortality, 844. Over half the population had the disease, and one-thirteenth died.

In 1872-3, an epidemic the most malignant and destructive in living memory occurred in the same city. Its average mortality among the entirely unvaccinated was considerably over fifty per cent. The population was about 265,000. The number of cases during the thirteen months, January 1, 1872, to February 1, 1873, was 3,187; the deaths, 1,045. A very peculiar condition of things existed, the causes of which I have not space to explain. There were, practically, no means of isolation. In no way had the people of the Boston of 1872 any advantage against small-pox over their ancestors of 1721, except that yielded by vaccination, and even that most tardily afforded. But how immense that advantage! Without vaccination, the

epidemic of 1872-3 in Boston would have been terrific in its destructiveness. Let it be remembered that the disease, in the most malignant and contagious form, was present in every part of the city; that small-pox is a disease to which, with hardly an exception, every unprotected person is liable on exposure to its contagion. Were it not for vaccination, there would have been in these thirteen months at least 150,000 cases in Boston, and little less than 25,000 deaths, even if the epidemic had been no more contagious and fatal than that of 1721. It must be remembered, however, that it was very much more malignant and contagious, and that the rate of mortality among the quite unvaccinated was much more than three times as great. What was true of Boston in 1872-3 was true of every city and large town of Europe and America during that dread visitation. None but the grossly ignorant will sneer at these assertions, for a very superficial study of the history of small-pox before the eighteenth century will afford the authentic narrative of variolous epidemics far more destructive than my hasty approximative estimate. There is hardly a year in which, among some of the barbarous and quite unvaccinated populations which Mr. Bergh considers so enviable in their immunity from the twin scourges of humanity, physic and physicians, small-pox does not rage and destroy with far greater destructiveness. I have said that nothing can possibly be more conclusive than the statistics in favor of vaccination, even as practiced before the wide adoption of the great reform to which I have already alluded. Even the anti-vaccinist must admit this, if they are accepted as honestly and truly recorded. If, after studying a few of these statistics carefully, any doubt remains in the mind of the student, let him obtain, by application to Mr. William Young, London, the anti-vaccine answer and refutation of what he has read, for, each and all, anti-vaccinism has essayed to answer and refute. If he carefully analyzes these answers and still has any leaning to anti-vaccinism, his case is indeed hopeless. Nothing can be more contemptibly and transparently dishonest and sophistical, well calculated, indeed, to convince poor, illiterate, credulous people by appealing to their prejudices and to the always present jealousy, suspicion, and even hatred which the poor entertain against the wealthy, the ignorant against those who are better informed, but laughably inadequate to satisfy any rational, educated, and unprejudiced person save

of the truth of the doctrines of vaccination. How do the anti-vaccinists pretend to answer these thoroughly convincing statistics? One great and leading trick is to show that, in a certain epidemic, more of the vaccinated than of the unvaccinated died, utterly ignoring the accompanying fact that perhaps ninety-five per cent. of the population had been nominally vaccinated. Another is, to state the entire mortality of some epidemic before vaccination in which it was very small, say fifteen or even ten per cent., and compare it with that in the same city since vaccination, largely increased in population, during an epidemic of terrible contagiousness, malignancy, and consequent fatality. Another still, to take the mortality of all (vaccinated and unvaccinated) in some terrible epidemic like that of 1869-74, and compare it with that of some exceptionally mild epidemic before 1798, when, of course, all were unvaccinated.

When these and many other precisely similar and quite as dishonest trumpery subterfuges are, even to their contrivers, most evidently insufficient, comes the inevitable *dernier ressort*, the *ultima ratio stultorum*, to deny the truth and good faith of the statistics themselves. Every old wife's tale, every rascally charlatan's slanderous lie, every idiot's exaggeration, is repeated and accepted as "confirmation strong as Holy Writ"; but the most authentic, elaborate, consistent, scrupulously exact statistics of great armies, Government bureaus, composed of the assembled returns from a thousand sworn officials, or of great public hospitals, open to daily, hourly inspection and criticism, are "doctored" statistics, "cooked" statistics—in other words falsehoods, and masses of falsehood, the work of a conspiracy of thousands of the noblest, most self-sacrificing, truthful men in existence. A conspiracy so well organized, that from every hospital, from every civilized government, are published statistics of precisely the same character, thoroughly corroborative of the inestimable value of vaccination. A conspiracy for what? To retain a little longer the loaves and fishes, the paltry income which accrues to a part of the medical profession from the practice of vaccination,—an income so small, so precarious, so insignificant compared with the labor it involves, that all physicians of any eminence, who are not actuated by a sense of duty, notoriously avoid and refuse the practice that wins it! The men who utter these villainous, wicked absurdities are not all so

utterly ignorant as Mr. Bergh. Some of them know better. They have studied the history of small-pox and vaccination, and are well aware that when the profession of medicine, almost to a man, adopted inoculation, the adoption involved the loss of that practice in small-pox which was by far the most lucrative source of professional income. They know, too, that when the same profession adopted vaccination, its doing so meant the abandonment of a far more profitable practice. Before either inoculation or vaccination were introduced, small-pox was as common among the wealthy and noble, as fatal to royalty itself, as it is now in those back slums of London, in which are the citadels and strongholds of squalor, vice, ignorance, and anti-vaccinism. The greatest income ever earned by a physician before the present century was that of the famous Dr. Ratcliffe, and was mainly, if not entirely, due to his reputed great skill and success in treating small-pox. Every city and large town in England then had physicians famed for their peculiar skill in treating that dreaded disease, and winning fame and fortune from the reputation. If a single physician in the mighty metropolis of the world, with its teeming millions, were now to confine himself to the treatment of small-pox, that specialty which once, when that city held not one-third of its present vast population, enriched scores of his profession, he would starve. It would be rarely that he would have a paying patient, for small-pox is practically unknown among the most civilized, enlightened, and, of course, best vaccinated classes, and, for the occasion, I will include with them the leaders of anti-vaccination, who are, almost to a man or woman, very thoroughly vaccinated.

All the sophistry of anti-vaccinators, all the shallow, baseless theories evolved from the inner consciousness of visionary pretenders to science among them, are utterly and absurdly inadequate to meet the one simple fact, patent to all, requiring no laborious research to ascertain, that precisely as they are well vaccinated are people exempt from danger of small-pox, while those who are the best vaccinated as a class, doctors and nurses, may be said to enjoy perfect immunity even during epidemics so intensely malignant and contagious as to attack all the unvaccinated, and many of the imperfectly or improperly vaccinated, exposed to their contagion. The favorite anti-vaccine theory is that small-pox is merely a result of bad drainage and neglect of

ordinary sanitary precaution, and that the immunity of the better classes is mainly due to improvements in plumbing, utterly ignoring the fact that long within the periods of written history small-pox was unknown in Europe and America, although all the conditions and causes which the sages of anti-vaccinism assure us are alone necessary and competent to the creation of the disease *de novo* existed to a far greater degree than now. Few things of the sort could be more amusing than an enumeration and analysis of the small-pox anti-vaccine theories of Spitzig, Both, Nightingale, and the rest; but I must forbear, with the simple statement that every anti-vaccine attempt to invalidate this entirely magistral and conclusive fact in favor of vaccination involves the denial of the contagiousness of small-pox—a denial as self-evidently absurd as would be that of the law of gravitation.

In regard to the second charge, let me say, at once, that it has been long alleged that syphilis was liable to be, and had been, transmitted by the operation of vaccination with humanized virus. The reports, however, were not made with such exactness, or by such authority, as commanded credence; and the accident has been of such prodigious rarity in all countries in which vaccination is properly done, that it was not till very recently, and by a most distinguished surgeon, pathologist, and ardent *advocate of vaccination*,—Mr. Jonathan Hutchinson, of London,—that a demonstration of the sad truth was at last made, which commands the implicit belief of even those most desirous not to be convinced. It is also a fact that a form of erysipelas, almost always slight, but always annoying and sometimes fatal, has been observed about once in five hundred vaccinations as generally done, and occasionally even after the most careful performance of the operation with the best humanized virus. These two sometimes inevitable results of even careful vaccination with humanized virus, can be perfectly avoided by the use of that obtained by exclusively bovine transmission of original cow-pox, such as at this time is, or has very recently been, employed to the amount of probably at least one hundred thousand vaccinations daily, in the tardy but very successful effort to control and arrest a most threatening and wide-spread epidemic in America. In the use of such virus, the first terrible accident is impossible, and, quite contrary to my first apprehensions, erysipelas has never been reported,—the few, very few cases, which deceived not very competent observers having been

invariably of simple erythema, a trivial affection due to friction of the vaccinated surface from unduly active work or exercise.

These two are the only diseases of which it could be truly said that, in certain instances, they would not have occurred but for vaccination. There remain, however, a considerable number of diseased conditions liable to complicate and follow vaccination. Some of these are the result of the effect of the slight constitutional disturbance incident to *vaccinia* bringing to the surface and making evident an eruption of disease already latent in the system sooner than would otherwise be the case, but the remainder, without exception, have no real relation with vaccination whatever, being the direct consequences of filthy habits of life, gross neglect of ordinary care, very morbid condition of patient, and, above all, and in the most severe cases, malpractice, gross and often even incredible, of physicians; in improper methods, and in use of virus taken from improper subjects, at too late a period of the disease, or in a state of decomposition. Besides these, there have been a few very severe and even fatal cases in which, as a result of accident, reckless imprudence, or drunkenness, the vaccinated arm had, when the eruption was "at its height," been exposed to intense and continued cold. It must be evident to the reader that any discussion of these unpleasant complications of what is, at any rate *nominally*, vaccination must necessarily be technical and, to be instructive, of considerable length. In either case it would be out of place in the REVIEW. I will, therefore, simply state that none of them have any but an accidental relation to vaccination. As long, however, as every disease except small-pox is as likely to occur after vaccination as before, so long will innumerable diseases be attributed to its influence by the ignorant. It is most unfortunate that a body of pretended philanthropists who ought to know better, many of whom do know better, yet see fit to approve the inevitable *post hoc, propter hoc* reasoning of the common people, and so encourage, not only antagonism to vaccination, but antipathy, even hatred, toward the members of that profession to whom the poor have so often to look, and never in vain, for relief and remedy in their direst misery and need. The misrepresentation of anti-vaccinism, whether willful or the result of ignorance, extends to every detail connected with vaccination. For instance, a recent prominent authority calls vaccine virus a "disgusting mucus." A still more scientific *confrère* considers it an equally disgusting



"pus," while many others of the same school are sure that it is nothing but a septic product, in other words, an animal substance in a state of putrefactive decomposition. Now, vaccine virus is a perfectly limpid, nearly colorless, and quite odorless slightly albuminous fluid, having no relation or analogy whatever with the well-known organic secretions of which Mr. Bergh and Dr. Both speak so disrespectfully, and so far from being septic that the moment it becomes slightly so, as a result of decomposition, it ceases to be vaccine virus, or to be capable of inducing *vaccinia*. I notice this trifling matter because it gives an excellent idea of the utterly loose, reckless way in which these people pronounce *dicta* on purely scientific subjects.

As a commentary on the wild ravings of De Lisle, Nittinger, Schiefferdecker, Bergh, and the more rabid anti-vaccinators on the deteriorating effect of vaccination on the human race, it may be worth while to state that since I introduced true animal vaccination in America, in September, 1870, there have been probably at least five thousand animals vaccinated. In vaccinating each, it is my custom to induce from sixty to one hundred, or even more, vesicles. When the disease is at its acme, a very slight elevation of temperature is noticeable, but the animal feeds well, and, at the worst, exhibits extremely trifling symptoms of discomfort for a day or two. At the end of sixteen or eighteen days, no trace of the disease remains but some slight superficial cicatrices. These animals are then sold to farmers, not butchers. They are not of the right age for the latter. Formerly, farmers were suspicious of the effect of vaccination on the value of the animals, and I had practically to give them away to whoever would take them. For several years, however, this is changed. We find plenty of farmers to buy our heifers when we have done with them, and so far from being prejudiced against them, many farmers prefer vaccinated animals to others, and state, with confidence, that they are less liable to sickness, and especially to cutaneous disease, and fatten remarkably well. This may be an erroneous opinion, but its expression makes it very evident that a proverbially shrewd and careful class of men have come to a very different conclusion from Mr. Bergh, as to the deteriorating effect of vaccination.

I may, perhaps, in conclusion, be permitted to give my own experience touching the two main and essential charges against

vaccination. It is now very nearly forty years since I began the study of medicine. With the exception of from two to three years' service as United States staff surgeon, and two brief absences in Europe, all these years have been of active practice in Boston, and in the southern portion of that city. During my entire professional life, I have paid very unusual attention to the study of vaccination, and have had, both in civil and military life, very great and continued opportunity to pursue the study. In the army I had, as surgeon in charge of hospitals and medical director, extraordinary facilities for the observation of the protective effect of vaccination in large bodies of troops, and in three large towns, and rapidly accomplished in each of the latter the "stamping out" of an epidemic which had raged with increasing extent and mortality for over a year. I had almost continuously under my direction, large, sometimes very large, numbers of cases of small-pox. In civil life I have devoted quite exceptional attention to the practice of vaccination, having in one year made nearly eleven thousand vaccinations. For nearly twenty-five years, in the total absence of all State or Governmental provision to that end, I have made a specialty of propagating and issuing to the profession the best attainable vaccine virus.

In pursuance of this enterprise, about twelve years since, I introduced into America the method of true animal vaccination, and for nearly nine years I have practiced that method exclusively. This specialty necessitated a vast number of vaccinations of infants, and a daily, hourly attendance on these during their whole course. It also placed me in direct correspondence with probably not far from half the medical profession of this country; certainly, during the entire period, an aggregate of twenty-five thousand physicians of all schools in America and elsewhere. Thousands of the infants that I vaccinated have grown to adult, to middle age, and many have, of course, terminated their earthly career. I have always considered vaccination by far the most important single duty of a physician, and have taken the utmost care that no neglect of mine should be the cause of any defect or irregularity in its accomplishment. I have tried to do my duty, but certainly no better than any physician can easily do it.

It is the great and all-sufficient consolation of my life that not only with my own hand have I shielded a great many people

from disease and death, but that I have also been the agent to afford to others the means of similarly protecting an almost incalculable multitude, and I have the perfect happiness of having been the introducer into America and a principal means of firmly establishing here a reform in vaccination, a reform which takes from anti-vaccinism its only weapon that had either point or edge. As a result of all this exceptional opportunity to form a deliberate and accurate opinion of vaccination, I wish to say, with as much solemn earnestness as if it were my last earthly utterance, that I have never known among those whom I have vaccinated a single case of small-pox in any form or modification, except a certain limited number into whose systems the germ of the disease had entered before the time of vaccination, making itself evident within fourteen days after the operation. I have never seen or suspected in my own practice one such case as Mr. Bergh asserts to exist by millions. I have never had a patient die in any way that could be, directly or indirectly, ascribed to vaccination. I have never had the slightest reason to even suspect, in a single instance, that vaccination had in any way impaired or deteriorated human vitality, but have seen several cases in which, besides preventing small-pox, it was the means of carrying off certain trivial ailments, and of very decidedly improving the general health of the patient. I am very sure that my experience is precisely similar to that of almost every physician who has given to vaccination the solicitous care that it merits and demands, and has omitted no part of his duty as a vaccinator.

I have seen as many of the cases which anti-vaccinism attributes to vaccination as most physicians, but not one of these could be fairly so attributed. I have never seen a case of vaccinal syphilis, although from my reading I am convinced that such cases have occurred. I have seen many cases of vaccinal erysipelas in my own practice, but all recovered, and not a single case has complicated or followed one of the almost countless vaccinations which I have made with true animal vaccine virus.

How is it, my eyes being tolerably wide open and having observed the course and result, immediate and remote, of tens of thousands of vaccinations, primary as well as secondary, that I have seen nothing in all these years, while Mr. Bergh, whose eyes are only just opening to the horrors of vaccination, and who is

certainly not very well educated to appreciate and weigh the value of symptoms ; who has probably not observed the course and results of ten vaccinations, if he has of one ; whose study, even of the literature of anti-vaccination, is apparently limited to the fifteen-page pamphlet of a wildly visionary theorist and a four-page London libel on myself, of which both his letter to Professor Chandler and his paper in the February NORTH AMERICAN are little more than reprints without acknowledgment, — has seen so much ?

I have heard of a school that is not

“ Any school,  
But that where blind and naked ignorance  
Delivers brawling judgments unashamed  
On all things all day long.”

Is Mr. Bergh, perhaps, one of its recent graduates ?

HENRY AUSTIN MARTIN.